

Application No. 09/682,895
D/A 1029

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-11. (Canceled)

12. (Currently Amended) A micromachined filter system, comprising:

a micro-device having a plurality of micromachined layers formed over a substrate;

and

a micromachined filter integrated in at least one of the micromachined layers, wherein a portion of each layer that comprises the micromachined filter consists of a series of substantially parallel beams.

13. (Currently Amended) A micromachined filter system, comprising:

a micro-device having a plurality of micromachined layers formed over a substrate;

and

a micromachined filter integrated in at least one of the micromachined layers, wherein a portion of each layer that comprises the micromachined filter consists of a series of substantially parallel columns.

14. (Previously Presented) The system of claim 12, wherein the micromachined filter comprises:

a first series of substantially parallel beams formed in a first micromachined layer; and

a second series of substantially parallel beams formed in a second micromachined layer, the first and second series of beams being substantially parallel and at least partially offset to one another.

15. (Previously Presented) The system of claim 12, wherein the micromachined filter comprises:

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a first series of substantially parallel beams formed in a first micromachined layer; and
a second series of substantially parallel beams formed in a second micromachined layer, the first and second series of beams extending in non-parallel directions with respect to one another.

16-18. (Canceled)

19. (Currently Amended) A filter comprising a micromachined layer of polysilicon, wherein a portion of the micromachined layer of polysilicon comprising the filter consists of a series of substantially parallel beams.

20. (Currently Amended) A filter comprising a micromachined layer of polysilicon, wherein a portion of the micromachined layer of polysilicon comprising the filter consists of a series of substantially parallel columns.

21. (Previously Presented) The filter of claim 19, wherein the micromachined layer of polysilicon comprises:

a first series of substantially parallel beams formed in a first micromachined layer; and
a second series of substantially parallel beams formed in a second micromachined layer, the first and second series of beams being substantially parallel and at least partially offset to one another.

22. (Previously Presented) The filter of claim 19, wherein the comprises a first series of substantially parallel beams; and

a second series of substantially parallel beams formed in a second micromachined layer, the first and second series of beams extending in non-parallel directions with respect to one another.

23-32. (Canceled)

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33. (Previously Presented) The system of claim 14, wherein the first and second micromachined layers are micromachined polysilicon layers.
34. (Previously Presented) The system of claim 15, wherein the first and second micromachined layers are micromachined polysilicon layers.
35. (Previously Presented) The filter of claim 21, wherein the first and second micromachined layers are micromachined polysilicon layers.
36. (Currently Amended) The filter of claim 22, wherein the first and second micromachined layers are micromachined polysilicon layers.
37. (Previously Presented) The system of claim 12, wherein the at least one of the micromachined layers is a micromachined polysilicon layer.
38. (Previously Presented) The system of claim 13, wherein the at least one of the micromachined layers is a micromachined polysilicon layer.
39. (Previously Presented) The system of claim 12, wherein each of the beams has a width of at least about 1 micron.
40. (Previously Presented) The filter of claim 19, wherein each of the beams has a width of at least about 1 micron.
41. (Previously Presented) The system of claim 12, wherein the micro-device has a fluid inlet through the substrate and the micromachined filter is situated downstream of the fluid inlet.
42. (Previously Presented) The system of claim 13, wherein the micro-device has a fluid inlet through the substrate and the micromachined filter is situated downstream of the fluid inlet.
43. (Previously Presented) The system of claim 41, wherein the micromachined filter is situated over the fluid inlet.

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44. (Previously Presented) The system of claim 42, wherein the micromachined filter is situated over the fluid inlet.